

Application No. 10/525,897

In the claims

1. (Currently amended) A device ~~Device~~ for converting an AC voltage ~~form the~~ from a mains electricity supply ~~into a DC voltage of a predetermined level (and waveform);~~ comprising:
a rectifier circuit ~~for to connecting~~ to the mains electricity supply;
a switching circuit connected to the rectifier circuit and through which current flows;
a main transformer through which current flows connected to the switching circuit and having a secondary winding; and
an auxiliary transformer ~~which is~~ connected to the switching circuit ~~and the~~ that has a secondary winding ~~of which is~~ with connecting terminals coupled in series to the secondary winding of the main transformer such that the current through the switching circuit and the main transformer is limited to a predetermined value.

2. (Currently amended) The device ~~Device~~ as claimed in claim 1, ~~wherein~~ further comprising a filter circuit ~~is connected~~ between the rectifier circuit and the switching circuit.

3. (Currently amended) The device ~~Device~~ as claimed in claim 2, wherein the filter circuit comprises a number of diodes.

Claims 4 to 12 previously cancelled.

13. (Currently amended) The device ~~Device~~ as claimed in claim 2, wherein the filter circuit comprises at least one capacitor and one self-induction element.

14. (Currently amended) The device ~~Device~~ as claimed in claim 3, wherein the filter circuit further comprises at least one capacitor and one self-induction element.

15. (Currently amended) The device ~~Device~~ as claimed in claim 1, wherein the switching circuit comprises a power transistor having a collector and an emitter and being in common-base configuration.

16. (Currently amended) The device ~~Device~~ as claimed in claim 2, wherein the switching

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circuit comprises a power transistor having a collector and an emitter and being in common-base configuration.

17. (Currently amended) The device ~~Device~~ as claimed in claim 3, wherein the switching circuit comprises a power transistor having a collector and an emitter and being in common-base configuration.

18. (Currently amended) The device ~~Device~~ as claimed in claim 13, wherein the switching circuit comprises a power transistor having a collector and an emitter and being in common-base configuration.

19. (Currently amended) The device ~~Device~~ as claimed in claim 14, wherein the switching circuit comprises a power transistor having a base, a collector and an emitter and being in common-base configuration.

20. (Currently amended) The device ~~Device~~ as claimed in claim 15, wherein the switching circuit further comprises a DIAC.

21. (Currently amended) The device ~~Device~~ as claimed in claim 16, wherein the switching circuit further comprises a DIAC.

22. (Currently amended) The device ~~Device~~ as claimed in claim 17, wherein the switching circuit further comprises a DIAC.

23. (Currently amended) The device ~~Device~~ as claimed in claim 18, wherein the switching circuit further comprises a DIAC.

24. (Currently amended) The device ~~Device~~ as claimed in claim 19, wherein the switching circuit further comprises a DIAC.

25. (Currently amended) The device ~~Device~~ as claimed in claim 15, wherein the auxiliary transformer is connected to the ~~collector or~~ emitter of the power transistor.

26. (Currently amended) The device ~~Device~~ as claimed in claim 16, wherein the auxiliary

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transformer is connected to the ~~collector~~ or emitter of the power transistor.

27. (Currently amended) The device ~~Device~~ as claimed in claim 17, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

28. (Currently amended) The device ~~Device~~ as claimed in claim 18, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

29. (Currently amended) The device ~~Device~~ as claimed in claim 19, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

30. (Currently amended) The device ~~Device~~ as claimed in claim 20, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

31. (Currently amended) The device ~~Device~~ as claimed in claim 21, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

32. (Currently amended) The device ~~Device~~ as claimed in claim 22, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

33. (Currently amended) The device ~~Device~~ as claimed in claim 23, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

34. (Currently amended) The device ~~Device~~ as claimed in claim 24, wherein the auxiliary transformer is connected to the ~~collector~~ or emitter of the power transistor.

35. (Currently amended) The device ~~Device~~ as claimed in claim 1, wherein the auxiliary transformer further has a diode is-connected between the connecting terminals of the secondary windings of the auxiliary ~~transistor~~ transformer.

36. (Currently amended) The device ~~Device~~ as claimed in claim 30, wherein the auxiliary transformer further has a diode is-connected between the connecting terminals of the secondary winding of the auxiliary ~~transistor~~ transformer.

37. (Currently amended) The device ~~Device~~ as claimed in claim 31, wherein the auxiliary

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transformer further has a diode ~~is~~ connected between the connecting terminals of the secondary windings of the auxiliary ~~transistor~~ transformer.

38. (Currently amended) The device ~~Device~~ as claimed in claim 32, wherein the auxiliary transformer further has a diode ~~is~~ connected between the connecting terminals of the secondary windings of the auxiliary ~~transistor~~ transformer.

39. (Currently amended) The device ~~Device~~ as claimed in claim 33, wherein the auxiliary transformer further has a diode ~~is~~ connected between the connecting terminals of the secondary windings of the auxiliary ~~transistor~~ transformer.

40. (Currently amended) The device ~~Device~~ as claimed in claim 34, wherein the auxiliary transformer further has a diode ~~is~~ connected between the connecting terminals of the secondary windings of the auxiliary ~~transistor~~ transformer.

41. (Currently amended) The device ~~Device~~ as claimed in claim 36, wherein the switching circuit further comprises a resistor ~~is~~ connected between the base and the collector or emitter of the power transistor.

42. (Currently amended) The device ~~Device~~ as claimed in claim 37, wherein the switching circuit further comprises a resistor ~~is~~ connected between the base and the collector or emitter of the power transistor.

43. (Currently amended) The device ~~Device~~ as claimed in claim 38, wherein the switching circuit further comprises a resistor ~~is~~ connected between the base and the collector or emitter of the power transistor.

44. (Currently amended) The device ~~Device~~ as claimed in claim 39, wherein the switching circuit further comprises a resistor ~~is~~ connected between the base and the collector or emitter of the power transistor.

45. (Currently amended) The device ~~Device~~ as claimed in claim 40, wherein the switching

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circuit further comprises a resistor is connected between the base and the collector or emitter of the power transistor.

46. (Currently amended) The device ~~Device~~ as claimed in claim 41, wherein the switching circuit further comprises a resistor with a temperature-dependent value is connected between the base of the power transistor ~~on the one hand~~ and the collector or emitter ~~on the other~~.

47. (Currently amended) The device ~~Device~~ as claimed in claim 42, wherein the switching circuit further comprises a resistor with a temperature-dependent value is connected between the base of the power transistor ~~on the one hand~~ and the collector or emitter ~~on the other~~.

48. (Currently amended) The device ~~Device~~ as claimed in claim 43, wherein the switching circuit further comprises a resistor with a temperature-dependent value is connected between the base of the power transistor ~~on the one hand~~ and the collector or emitter ~~on the other~~.

49. (Currently amended) The device ~~Device~~ as claimed in claim 44, wherein the switching circuit further comprises a resistor with a temperature-dependent value is connected between the base of the power transistor ~~on the one hand~~ and the collector or emitter ~~on the other~~.

50. (Currently amended) The device ~~Device~~ as claimed in claim 45, wherein the switching circuit further comprises a resistor with a temperature-dependent value is connected between the base of the power transistor ~~on the one hand~~ and the collector or emitter ~~on the other~~.